BookletChart

South Haven to Stony Lake

10

18

(NOAA Chart 14906)

8

12

16

13

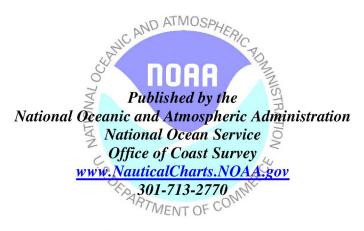


A reduced scale NOAA nautical chart for small boaters. When possible, use the full size NOAA chart for navigation.

- ☑ Complete, reduced scale nautical chart
- ✓ Print at home for free
- ✓ Convenient size
- ☑ Up to date with all Notices to Mariners
- ✓ United States Coast Pilot excerpts

✓ Compiled by NOAA, the nation's chartmaker.





What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart[™]?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at http://www.NauticalCharts.NOAA.gov.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.



[Coast Pilot 6, Chapter 11 excerpts]

(240) White Lake, about 20 miles SSE of Little Sable Point, is separated from Lake Michigan by a narrow strip of sandy bluffs. A dredged cut affords access between the lakes. The towns of Montague, Mich., and Whitehall, Mich., are at the NE end of White Lake about 4 miles above the cut. (243) In White Lake, at the inner end of the dredged channel, the channel bends SE around the shoal off Indian Point. The S edge of the shoal is marked by lighted buoys.

The lake has central depths of 25 to 70 feet with shoals extending as much as 0.6 mile from shore. Lighted buoys and lights at the outer edges of the shoals mark the deep water through the lake to its head. **White River** flows into the head of the lake between Montague and Whitehall. The bar at the mouth of the river has depths of 2 feet.

(250) **Muskegon Harbor**, 31 miles SSE of Little Sable Point, consists of Muskegon Lake and a dredged entrance channel which connects it with Lake Michigan. Facilities for a wide range of commerce are on the S shore of the harbor at the city of **Muskegon**, **Mich.**, and at its E end. (257) **Muskegon Lake** is about 4 miles long and varies from 2 miles wide at the W end to as little as 0.6 mile in the E part. The lake has central depths of 25 to 79 feet. Near midlength of the lake, shoals marked at the outer edges by lights extend from the N and S shores and restrict the available width of deep water to 1,600 feet. There are many obstructions in the shallow parts of the lake, including cribs, pipelines, and submerged pilings and dock ruins.

(259) **Bear Lake** parallels the NW side of the NE end of Muskegon Lake and has its outflow through a narrow channel into its N side. **North Muskegon, Mich.**, is the community on the peninsula between the two lakes

(281) **Mona Lake,** a small body of water 4.8 miles S of Muskegon, has several summer resorts and is used by small recreational craft. This narrow lake is about 3.5 miles long with general depths of 18 to 40 feet. It empties into Lake Michigan through a slightly winding channel at the W end. In 1971, the controlling depth in the channel was 3 feet, but it is at times entirely closed by sandbars. The ruins of two piers protect the entrance. The N pier is almost entirely washed away, and the S pier is gone except for a double row of piles extending from a point 50 feet out in the lake to a point about 450 feet inside. The banks rise steeply from each shore.

(284) **Grand Haven, Mich.**, is a city and harbor on the **Grand River**, 43 miles S of Little Sable Point. The towns of **Ferrysburg, Mich.**, and **Spring Lake, Mich.**, front the N side of the river. These communities are not visible from Lake Michigan because of sand dunes and hills immediately N and S of the harbor entrance. The principal commodities handled in the port are coal and sand.

(285) **Grand Haven South Pierhead Entrance Light** (43°03.5'N., 86°15.4'W.), 42 feet above the water, is shown from a red fog signal building on the outer end of the S pier; a fog signal is at the light. (324) **Port Sheldon** is a small harbor in **Pigeon Lake** 55 miles S of Little Sable Point. Pigeon Lake is connected to Lake Michigan by a entrance channel constructed by Consumers Energy Co. The channel is protected by two piers, each marked at the outer end by a private light. The primary purpose of the channel is to provide cooling water for the powerplant on the N side of the lake. In 2002, the reported controlling depth in the channel was 4.8 feet. Mariners entering the harbor do so at their own risk and are requested not to dispose of waste in Pigeon Lake. There are no public small-craft facilities in the lake. A **slow-no wake speed** is enforced in the lake. A 650-foot white stack and a lighted 400-foot red and white banded stack at the Consumers Energy Co. on the N side of Pigeon Lake are prominent.

(326) Holland Harbor, 63 miles S of Little Sable Point, is formed by Lake Macatawa, which is connected to Lake Michigan at its W end by an improved channel. The lake extends 5 miles E to its head at the mouth of Macatawa River and has a least width of 1,000 feet near its midlength. The width increases to over 1 mile in the vicinity of Big Bay and Pine Creek Bay, two large indentations in the N shore of the lake. The city of Holland, Mich., fronts the E shore and much of the S shore of the lake. Macatawa, Mich., is a small resort community on the SW side of the lake. The principal commodities handled in the port are coal, salt, cement, stone, and agricultural chemicals.

(327) **Holland Harbor North Breakwater Light** ($42^{\circ}46.4^{\circ}N.$, $86^{\circ}13.0^{\circ}W.$), 27 feet above the water, is shown from a white cylindrical tower with a green band on the outer end of the breakwater.

(334) **Holland Coast Guard Station** is on the N side of Lake Macatawa near the harbor entrance.

(342) There are numerous marinas throughout Lake Macatawa. Gasoline, diesel fuel, water, ice, electricity, sewage pump-out facilities, marine supplies, and launching ramps are available. Several lifts to 60 tons are available for hull, engine, and electronic repairs.



Corrected through NM Feb. 12/05 Corrected through LNM Feb. 8/05

HOBIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which is Norm American Daruh or 1982 (NAU 83), whilch for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1902 must be corrected an average of 0.032* northward and 0.268* westward to agree with this chart.

CAUTION

BASCULE BRIDGE CLEARANCES

For bascule bridges, whose spans do not open to a full upright or vertical position, unlimited vertical clearance is not available for the entire charted horizontal clearance.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some whiter months or when endan-

gered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National

O.S. Coast Guara Light Lists after National Geospatial-Intelligence Agency Publication 117.
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:

(Accurate location) o(Approximate location)

RACING BUOYS

Racing buoys within the limits of this chart are not shown hereon. Information may be obtained from the U.S. Coast Guard District Offices as racing and other private buoys are not all listed in the U.S. Coast Guard Light List.

NOAA WEATHER BADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts.
The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Grand Rapids, MI KIG-63 Hesperia, MI Oshtemo West Olive, MI WWF-36 WWF-34 WXN-99

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 6 for important supplemental information.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

NOTE A

NOTE A

Navigation regulations are published in Chapter 2, U.S.
Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio or at the Office of the District Engineer, Corps of Engineers in Detroit, Michigan.

Refer to charted regulation section numbers.

Table of Selected Chart Notes

CAUTION

Due to periodic high water conditions in the Great Lakes, some features charted as visible at Low Water Datum may be submerged. particularly in the near shore areas. Mariners should proceed with

SOURCE DIAGRAM

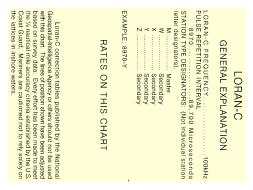
Most of the hydrography identified by the letter 'j' was surveyed by the U.S. Army Corps of Engineers prior to 1974. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, <u>United States Coast Pilot</u>.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

POTABLE WATER INTAKE

Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U.S. Coast Pilot 6 for important supplemental



CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

The prudent mariner will not rely solely on any single aid to navigation particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

This nautical chart has been designed to promote safe navigation. The National Osen Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U. S. Coast Guard.

SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information

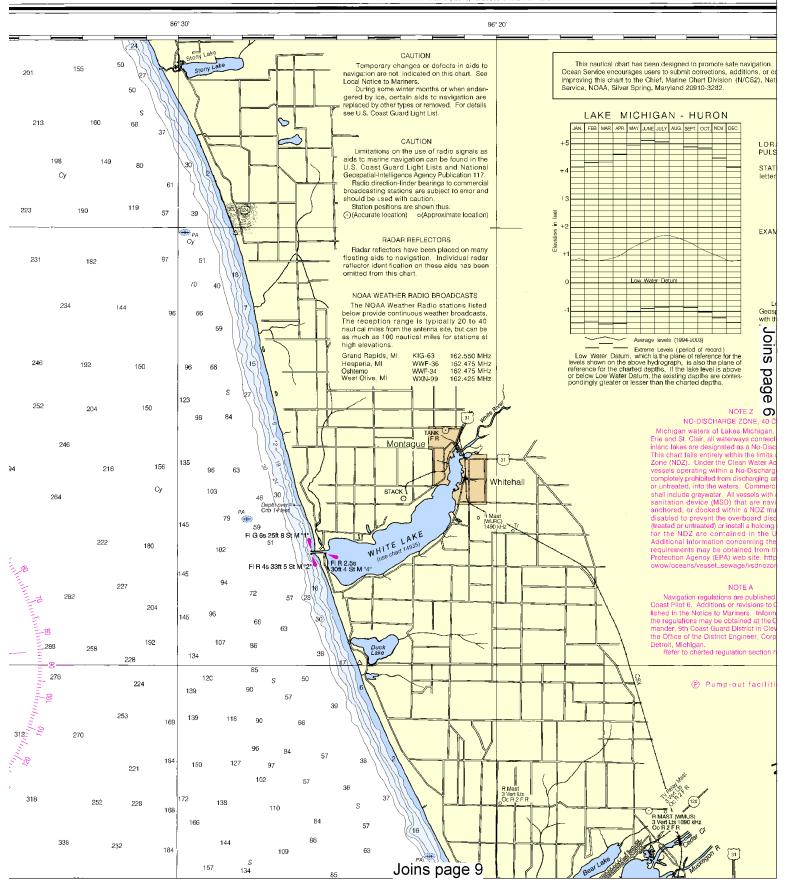
PRINT-ON-DEMAND CHARTS

This chart is available in a version updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts.

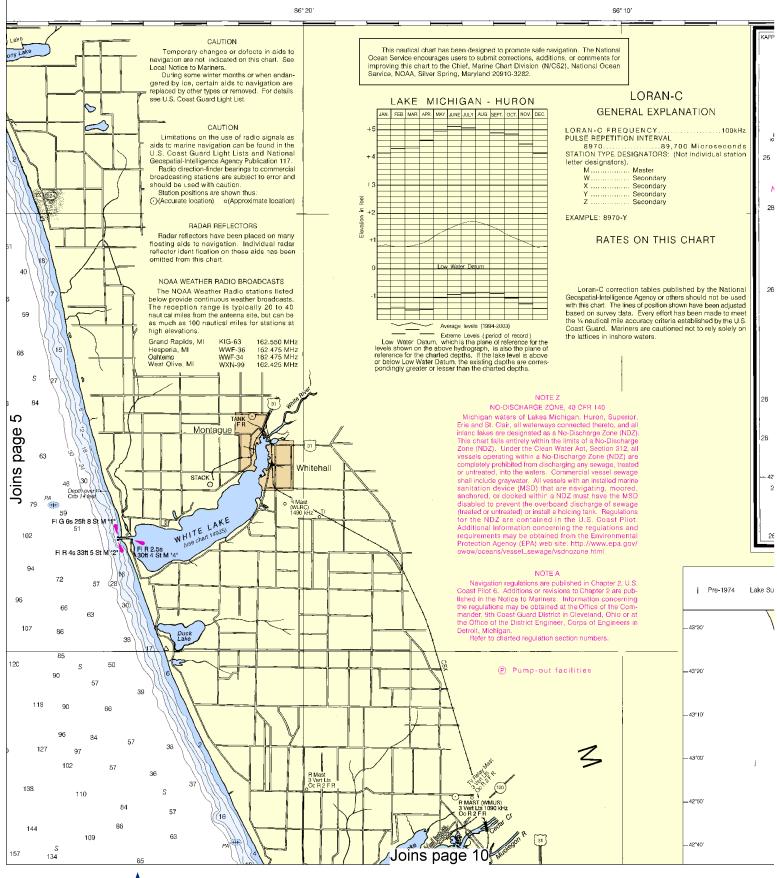
PHINT-ON-DEMANU CHARTS

This chart is available in a version updated weekly by NOAA for Not ces to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts.

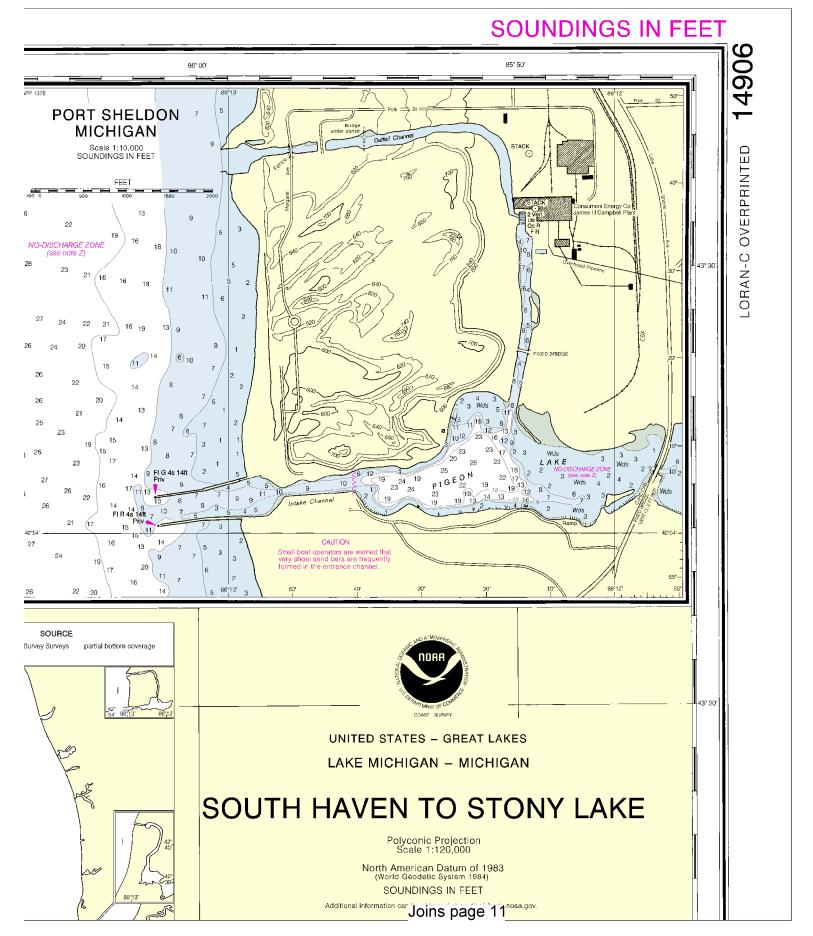




This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:160000. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.





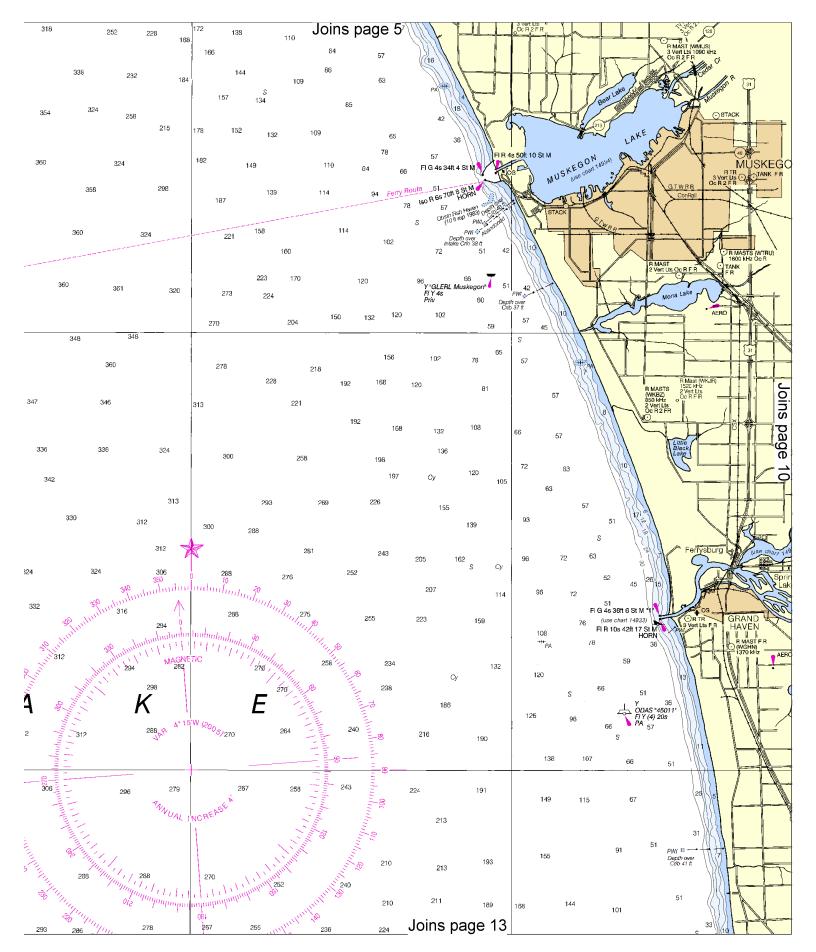




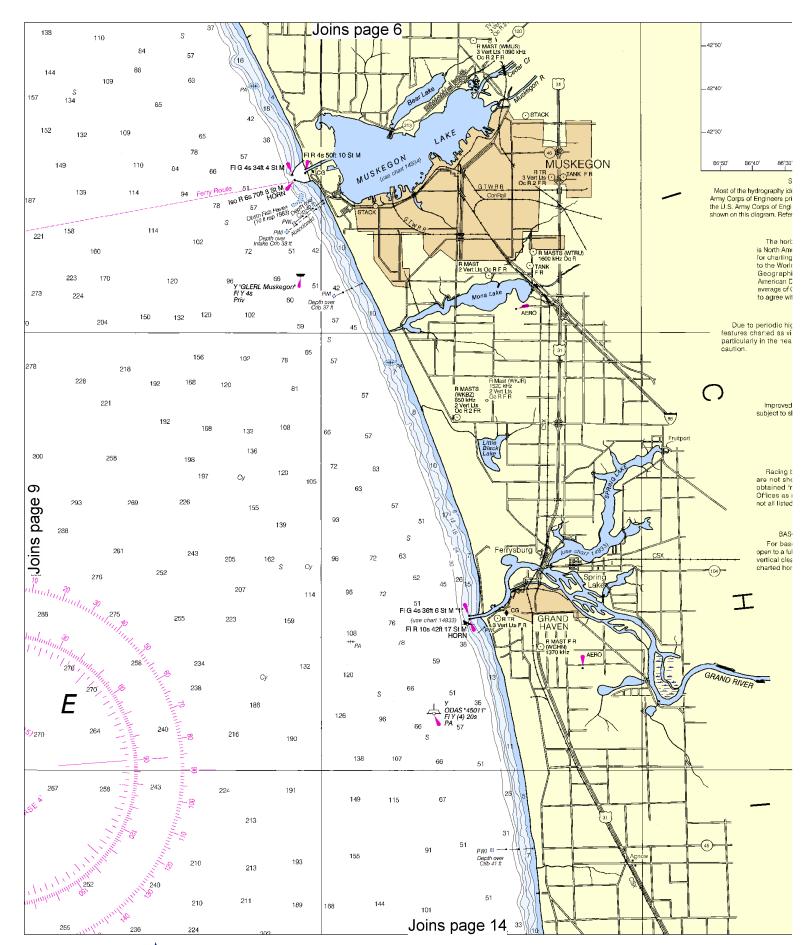


	āU	384	384	Joins pag	je 4 ₃₇₈	390	0/≥ /**/ mpn	dun unhunhunhunh.	342 336
		337	384	396	388	394	200 190	081200 35	8 111111111111111111111111111111111111
	370	376	376	390			190	1370 170 180 170 36	0 342
	348	360	372	366	366	372 378	378	360	
					000	388	393 3	369	366
	348	353 36	3	361	368				363
	336	342	336	348	354	372	384	375 366	360
	332	337	342	345	347	384	365	359 Ferry	Roule 358
43° 10'		324	324	336	336	37	78 354	354	354 348
	313								
	Ferry Route	304	317	318	331	354	356	354	353 ₃ ,
		288 294	306	312	330	348	348 342	342	336
	282	300	306	312		356		347	317
	288		999	312	336	348	348 342	3	30 336
			326	1		340	348		338
	294 T	300	306	306	312	324 336	342	330	324 324
	305	302	317	319	3	339	348	338	332 3
	312	312	324	318	324	324	336 33	318	
	304	314	į	323		328		338	320 × A
	I I I I	312 318		324	318	324 324	336	336	318 9 312
1 43° 00'	311	320	022	339	200		332	334 32	0,27
		320	333	339	333	330	302	334 32	3 313 280 312 330
	324	306 336	348	330	318	220			8 1111111111111111111111111111111111111
	r				318	330	324	318	312 300 8
;	323	324 338	351	328	Joins	s page 12	318 318	313	301



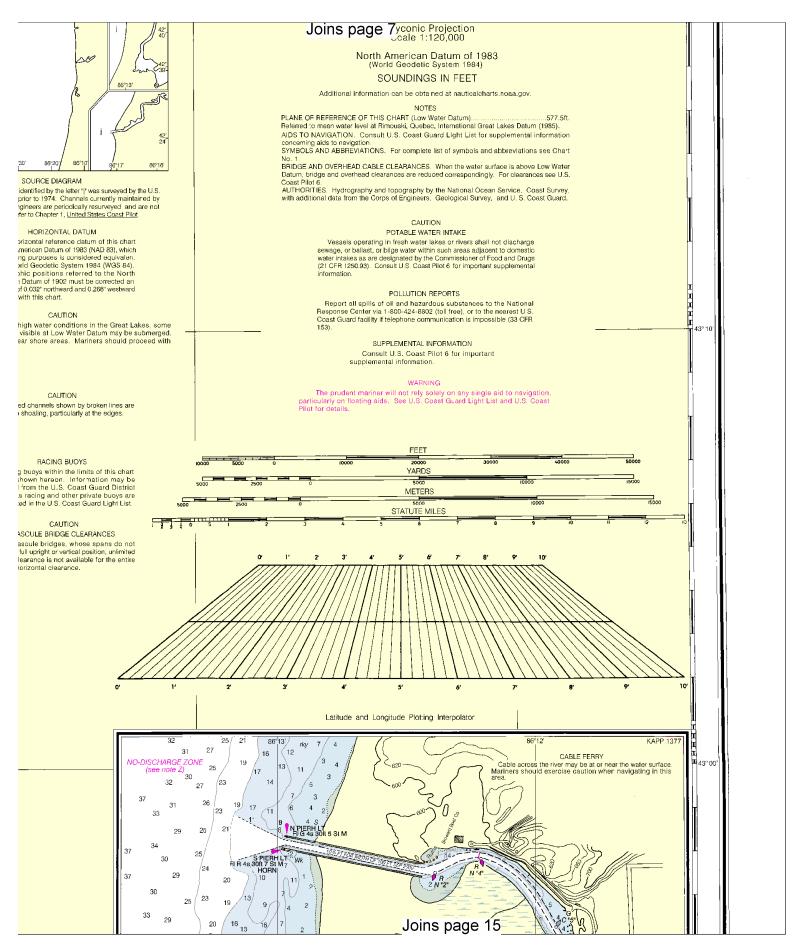


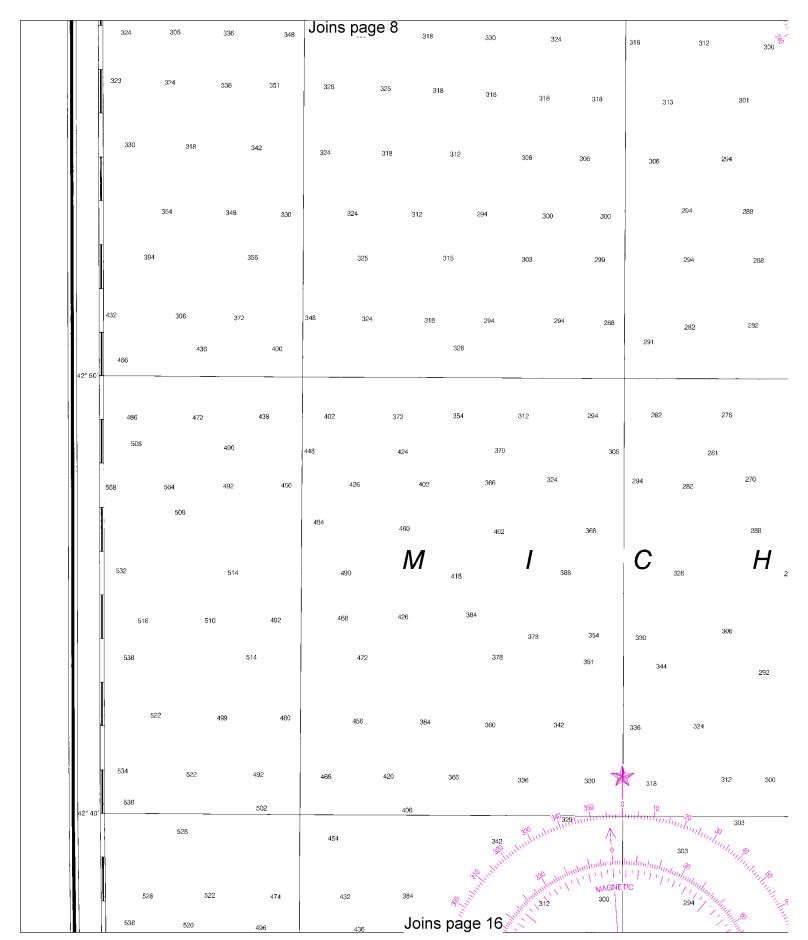




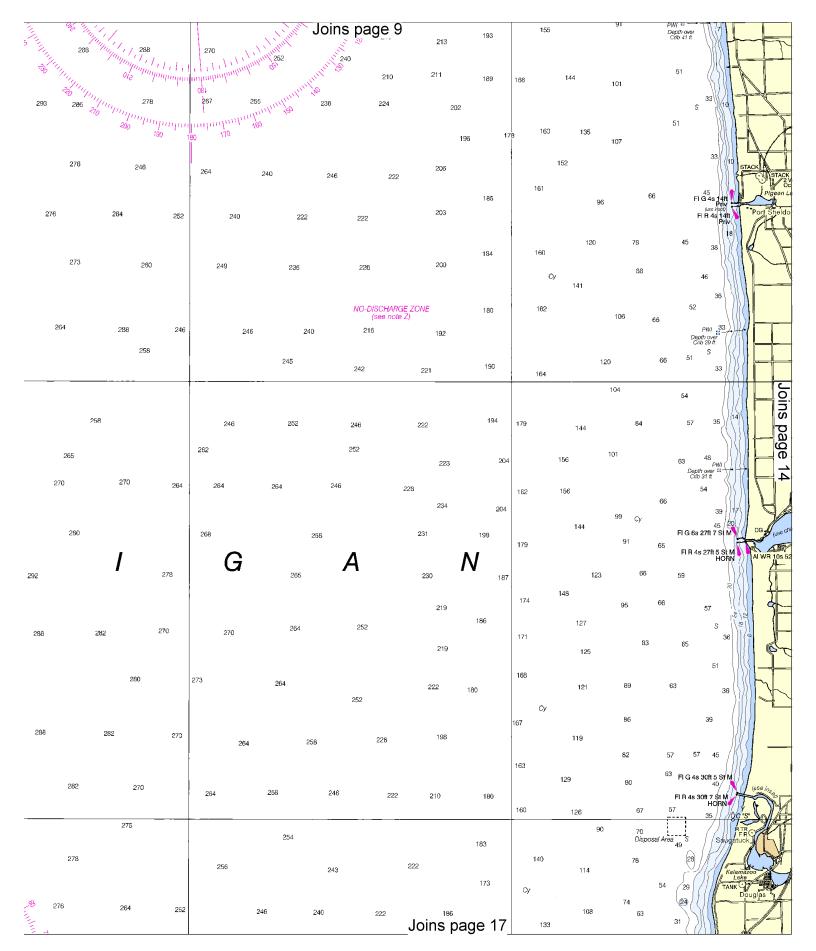


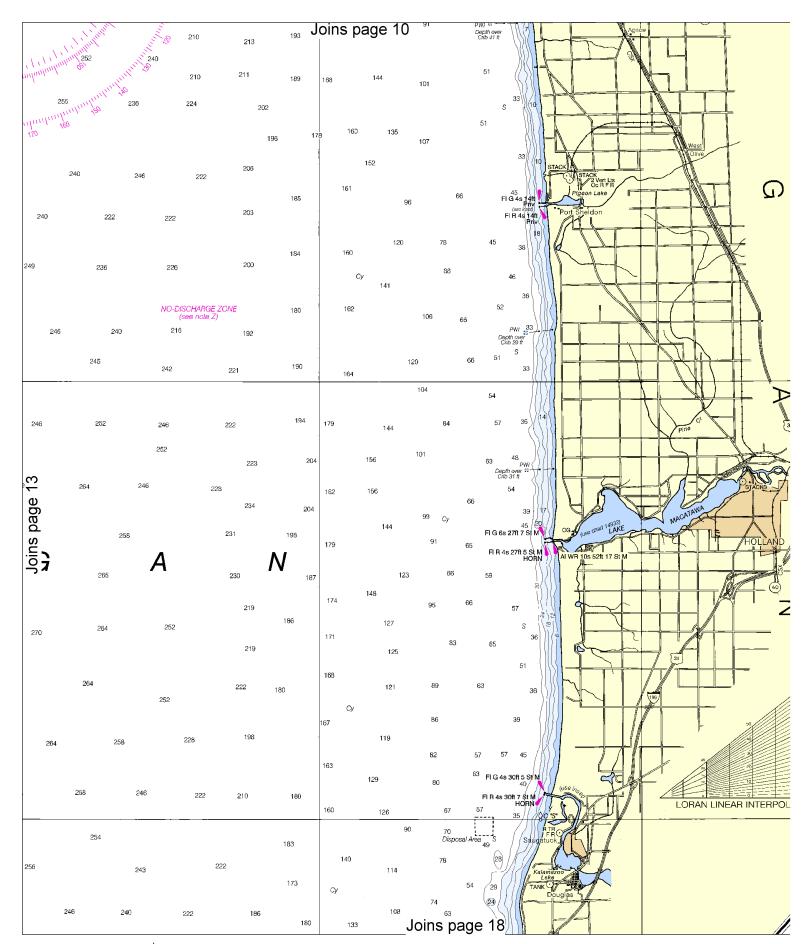






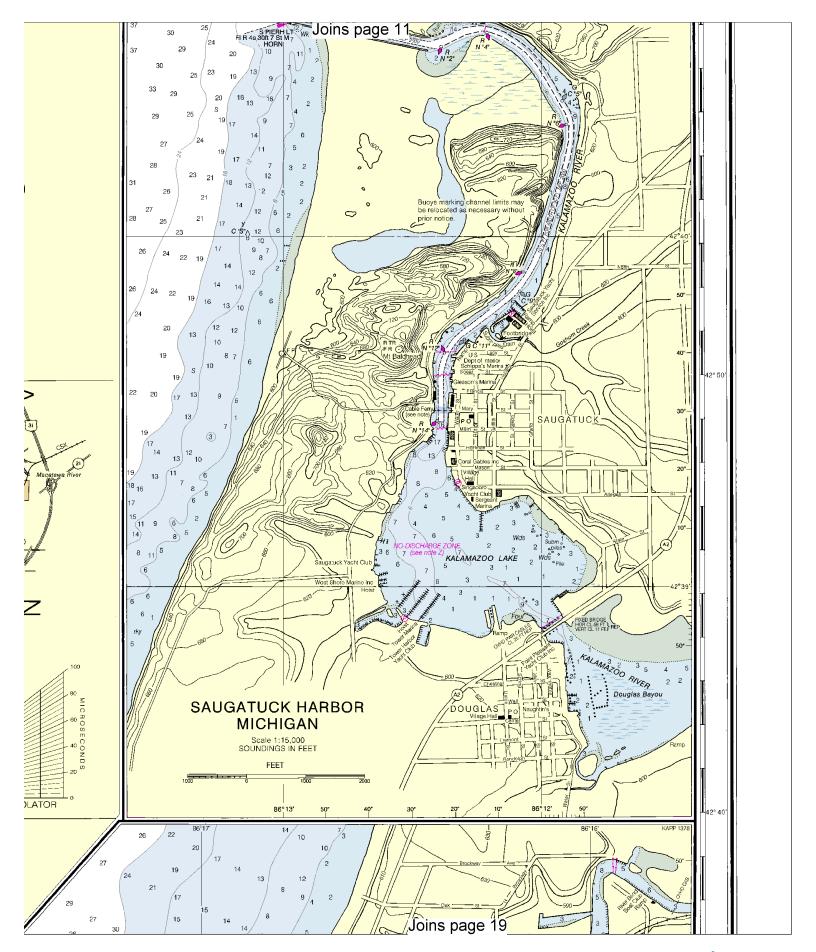


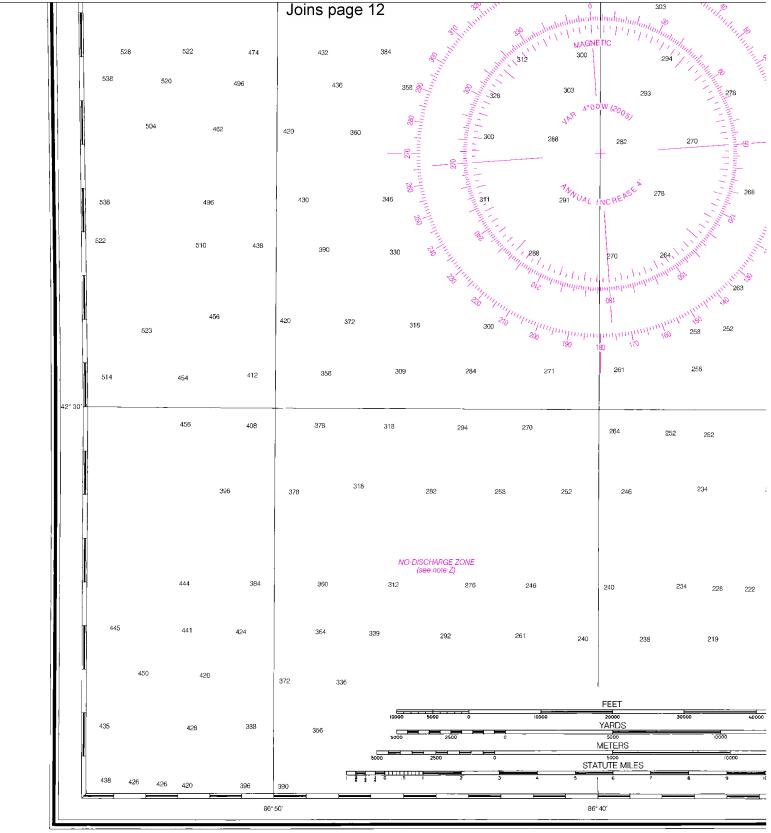












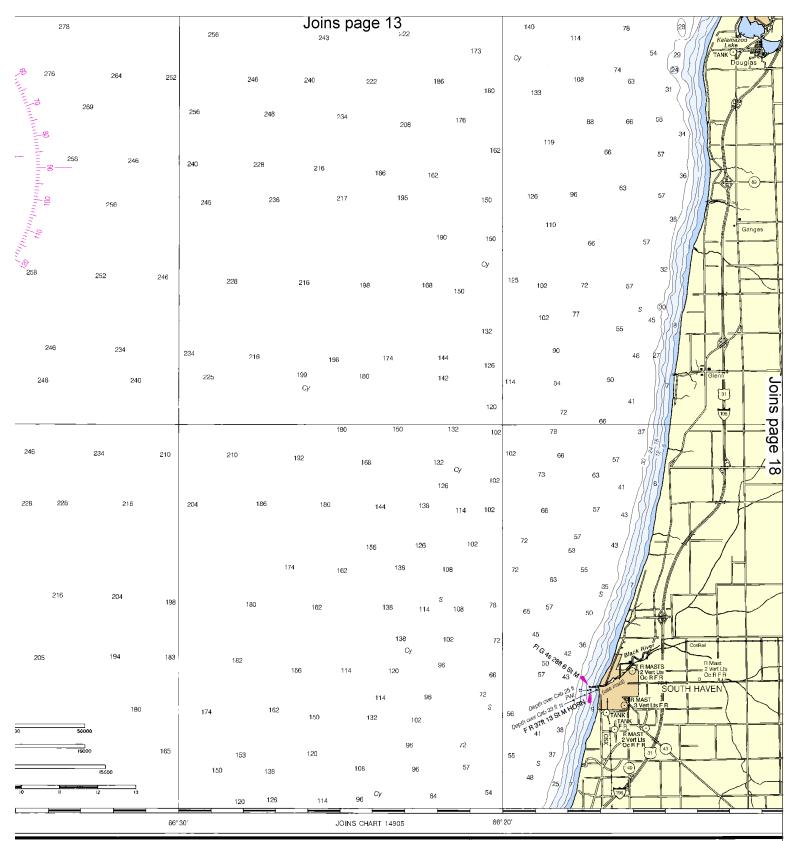
24th Ed., Feb. / 05 Corrected through NM Feb. 12/05 Corrected through LNM Feb. 8/05 LORAN-C OVERPRINTED

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner.

SOUNDINGS IN F





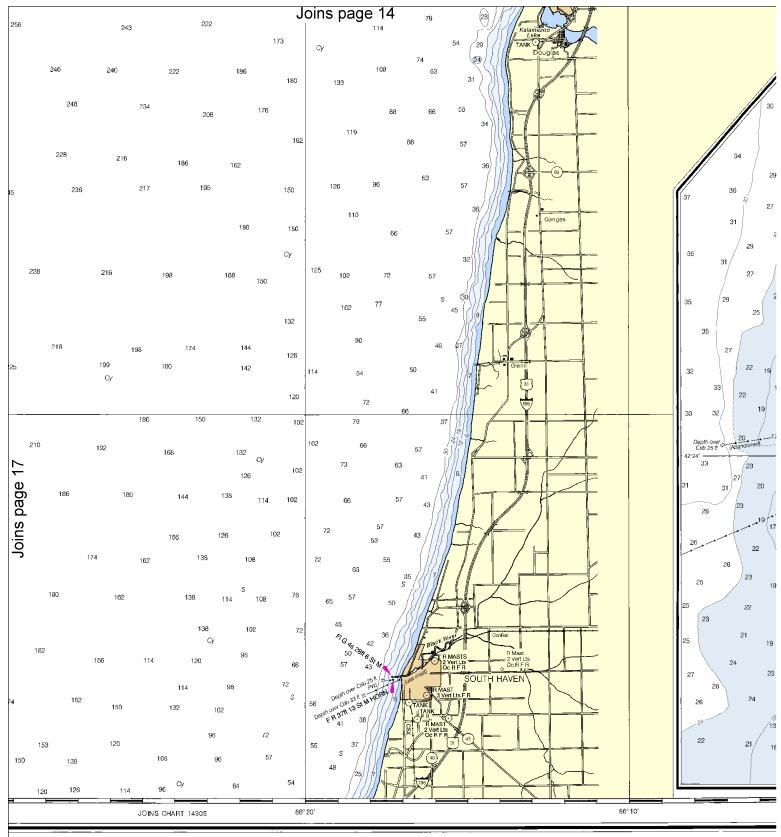


FEET

ACKNOWLEDGMENT

The National Ocean Service acknowledges the exceptional cooperation received from members of the Muskegon Power Squadron, District 9. United States Power Squadrons, in continually providing essential information for revising this chart.

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY



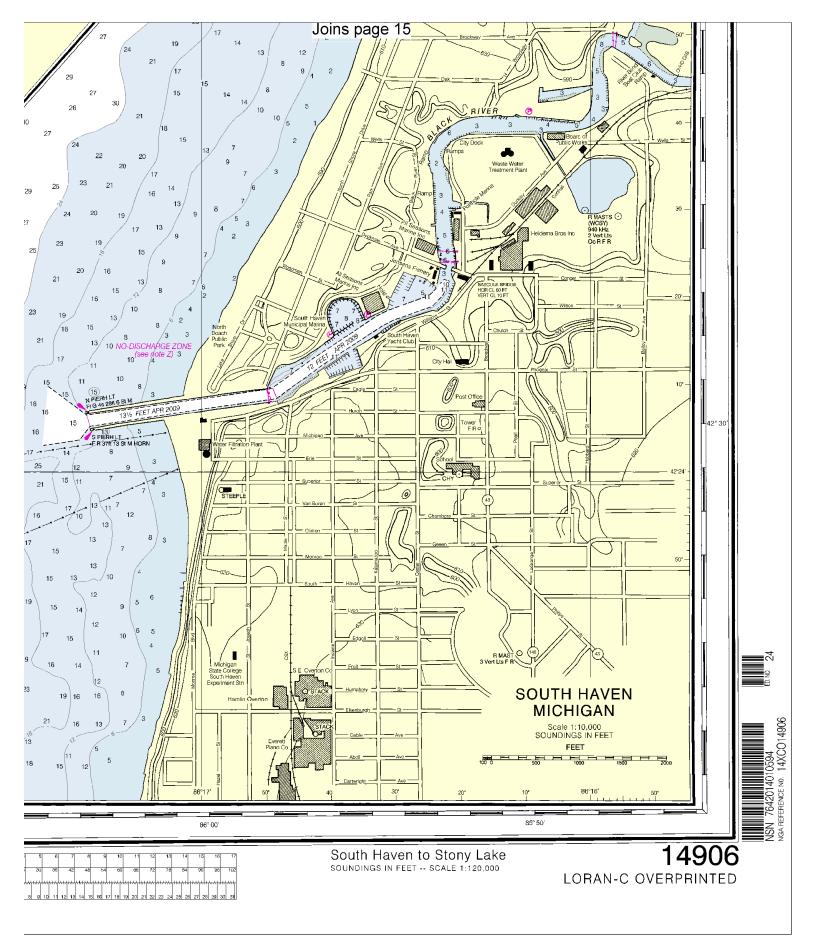
CKNOWLEDGMENT
I Ocean Service acknowledges the peration received from members on Power Squadron, District 9, Power Squadrons, in continually ntial information for revising this

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS	1	2	3	4
FEET	6	12	18	24
METERS	1 2	3	4 5	6 7 8







EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls

to Coast Guard and others, and to initiate calls to other vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 & 78A – Recreational boat channels.

Distress Call Procedures

- 1. Make sure radio is on.
- 2. Select Channel 16.
- 3. Press/Hold the transmit button.
- 4. Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- 6. Release transmit button.
- Wait for 10 seconds If no response Repeat MAYDAY Call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!!

Mobile Phones – Call 911 for water rescue.

Coast Guard Search & Rescue (RCC) – 216-902-6117

Coast Guard S & R (Sector Great Lakes) – 616-850-2501

<u>NOAA Weather Radio</u> – 162.400 MHz, 162.425 MHz, 162.450 MHz, 162.475 MHz, 162.500 MHz, 162.525 MHz, 162.550 MHz.

Getting and Giving Help – Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.



NOAA CHARTING PUBLICATIONS

Official NOAA Nautical Charts – NOAA surveys and charts the national and territorial waters of the U.S, including the Great Lakes. We produce over 1,000 traditional nautical charts covering 3.4 million square nautical miles. Carriage of official NOAA charts is mandatory on the commercial ships that carry our commerce. They are used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters. NOAA charts are available from official chart agents listed at: www.NauticalCharts.NOAA.gov.

Official Print-on-Demand Nautical Charts — These full-scale NOAA charts are updated weekly by NOAA for all Notice to Mariner corrections. They have additional information added in the margin to supplement the chart. Print-on-Demand charts meet all federal chart carriage regulations for charts and updating. Produced under a public/private partnership between NOAA and OceanGrafix, LLC, suppliers of these premium charts are listed at www.OceanGrafix.com.

Official Electronic Navigational Charts (NOAA ENCs®) -

ENCs are digital files of each chart's features and their attributes for use in computer-based navigation systems. ENCs comply with standards of the International Hydrographic Organization. ENCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official Raster Navigational Charts (NOAA RNCs[™]) –

RNCs are geo-referenced digital pictures of NOAA's charts that are suitable for use in computer-based navigation systems. RNCs comply with standards of the International Hydrographic Organization. RNCs and their updates are available for free from NOAA at www.NauticalCharts.NOAA.gov.

Official BookletCharts[™] – BookletCharts[™] are reduced scale NOAA charts organized in page-sized pieces. The "Home Edition" can be downloaded from NOAA for free and printed. The Internet address is www.NauticalCharts.gov/bookletcharts.

Official PocketChartsTM – PocketChartsTM are for beginning recreational boaters to use for planning and locating, but not for real navigation. Measuring a convenient 13" by 19", they have a 1/3 scale chart on one side, and safety, boating, and educational information on the reverse. They can be purchased at retail outlets and on the Internet.

Official U.S. Coast Pilot® – The Coast Pilots are 9 text volumes containing information important to navigators such as channel descriptions, port facilities, anchorages, bridge and cable clearances, currents, prominent features, weather, dangers, and Federal Regulations. They supplement the charts and are available from NOAA chart agents or may be downloaded for free at www.NauticalCharts.NOAA.gov.

Official On-Line Chart Viewer – All NOAA nautical charts are viewable here on-line using any Internet browser. Each chart is up-to-date with the most recent Notices to Mariners. Use these on-line charts as a ready reference or planning tool. The Internet address is www.NauticalCharts.gov/viewer.

Official Nautical Chart Catalogs – Large format, regional catalogs are available for free from official chart agents. Page size, state catalogs are posted on the Internet and can be printed at home for free. Go to http://NauticalCharts.NOAA.gov/mcd/ccatalogs.htm.

Internet Sites: www.Noa.gov, <a href="